Borst L

Jim Darnell

UNIVERSITEIT VAN AMSTERDAM
Afdeling Medische Enzymologie
Laboratorium voor Biochemie
Jan Swammerdam Instituut
Eerste Constantijn Huygensstraat 20
Telefoon 18 13 13

AMSTERDAM, May 10th, 1979. OR-5/21/79 AQ

Z. Cohn 6/23

Hoofd: Prof. dr. P. Borst
PB/MT/451
006.4

Correspondentieadres:
Postbus 20300
1005 GA AMSTERDAM

Dr. J.LEDERBERG,
President,
The Rockefeller University,
1230 York Avenue,
NEW YORK, N.Y. 10021

U.S.A.

Dear Dr. Lederberg,

We have indeed been interested in trypanosomes since 1971 as a side-line of our work on mitochondrial biogenesis (see ref. 1). At first our experiments with trypanosomes mainly dealt with kinetoplast DNA (see refs 2-4). More recently we have used restriction endonuclease analysis of nuclear DNA to analyse the differences between related African trypanosomes and to supplement iso-enzyme studies (this works well, but the work has not been written up) and we have started looking at the molecular basis of antigenic variation, in collaboration with several other laboratories. As a side-line of the DNA work, one graduate student (Fred Opperdoes) has worked with me on the metabolism of bloodstream trypanosomes. This has led to new insights in the subcellular location of enzymes [5,6], the mechanism of anaerobic glycolysis [7-9] and to the discovery of the glycosome [9]. Some of these findings may be of some use in screening for new chemotherapeutic agents [8,10].

The trypanosome work in this lab has always been a side-line and it has been difficult to keep it going. When Fred Opperdoes completed his thesis on trypanosome metabolism, it was impossible for him to find a job in Holland to continue his trypanosome work. After two more post-doc years here, he found a temporary job for 4 years with De Duve in the ICP in Brussels. He is an excellent investigator who has made the most important contributions to our knowledge of trypanosome metabolism in the last 5 years. This has been acknowledged recently, when he received the AKZO prize for fundamental research in basic biology, a prize given once every 3 years to the most promising young investigator in the field (in Holland).

Other people who worked with me on trypanosomes, also had difficulties in continuing their research. Dr. Alan H.Fairlamb, an outstanding post-doc from England (see ref. 2), had the greatest difficulty to get minimal support for his research when he returned after one year to Edinburgh. His present address is: Dept. of Biochemistry, University of Edinburgh Medical School, Teviot Place, Edinburgh EH8 9AG, U.K.

Finally, my present graduate student who works with trypanosomes, Mr. Jan Hoeijmakers, will be unable to continue in this field after completing his thesis at the end of this year. Again, this is a highly motivated, very capable young scientist who has been the centre of the research with trypanosomes in my lab over the last 2 years and who has provided the guidance to the many visitors that WHO sends to us.

vervolgblad van schrijven d.d. May 10th, 1979.
PB/MT/451
aan 006.4
Dr. J.Lederberg.

In my opinion there is no lack of good people or good ideas and some of the major parasites provide excellent model systems for fundamental research in biology. This research could provide a continuing source of inspiration and manpower for more applied projects in this field. The main problem in Holland at the moment is lack of support to provide continuity. The universities are cutting back severely in the exact sciences in favour of sociology, etc.; the research councils are suspicious of anything that smacks of applied research.

Through the Dutch Academy of Arts and Sciences I am trying to induce the government to start ear-marked, long-term support for basic research in the application of modern biological approaches to parasitic diseases. I am not optimistic about the outcome of my efforts, however. A set of reprints is sent to you under separate cover.

Yours sincerely,

Piet Borst.